

January 25, 2002

Mr. Van Medlock
Rogers Group, Inc. - Martinsville Asphalt
P.O. Box 25250
Nashville, Tennessee 37202-5250

Re: **109-15127**
First Significant Revision to
FESOP 109-7580-03217

Dear Mr. Medlock:

Rogers Group, Inc. - Martinsville Asphalt was issued a Federally Enforceable State Operating Permit (FESOP) on July 1, 1997 for a stationary hot batch mix asphalt plant. A letter requesting changes to this permit was received on November 1, 2001. Pursuant to the provisions of 326 IAC 2-8-11.1, a significant permit revision to this permit is hereby approved as described in the attached Technical Support Document.

The revision is for the use of No. 2 distillate oil, No. 4 distillate oil and reused oil, in addition to natural gas, at the one (1) aggregate dryer.

The following construction conditions are applicable to the proposed project:

1. General Construction Conditions
The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).
2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 (Revocation), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

Pursuant to 326 IAC 2-8-11.1, this permit shall be revised by incorporating the significant permit revision into the permit. All other conditions of the permit shall remain unchanged and in effect. Please attach a copy of this modification and the following revised permit pages to the front of the original permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact CarrieAnn Paukowits, c/o OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, at 631-691-3395 or in Indiana at 1-800-451-6027 (ext 631-691-3395).

Sincerely,

Original signed by

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Attachments

CAP/MES

cc: File - Morgan County
U.S. EPA, Region V
Morgan County Health Department
Air Compliance Section Inspector - Jim Thorpe
Compliance Branch - Karen Nowak
Administrative and Development - Lisa Lawrence
Technical Support and Modeling - Michele Boner

**FEDERALLY ENFORCEABLE STATE
OPERATING PERMIT (FESOP)
OFFICE OF AIR MANAGEMENT**

**Rogers Group, Inc. - Martinsville Asphalt
1500 Rogers Road
Martinsville, Indiana 46151**

(Herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the facilities listed in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR 70 and contains the conditions and provisions specified in 326 IAC 2-8 and 40 CFR 70.6 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments) and IC 13-15 and IC 13-17 (prior to July 1, 1996, IC 13-1-1-4 and IC 13-7-10).

Operation Permit No.: F 109-7580-03217	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date: July 1, 1997 Expiration Date: July 1, 2002

First Significant Permit Revision: SPR 109-15127-03217	Pages affected: 3, 4, 23, and 24; 24a, 24b, 24c and 27a are added
Issued by: Original signed by Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: January 25, 2002

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SECTION A

SOURCE SUMMARY

A.1 General Information

The Permittee owns and operates a stationary hot batch mix asphalt plant.

Responsible Official: John P. Torres
Source Address: 1500 Rogers Road, Martinsville, Indiana 46151
Mailing Address: P.O. Box 25250, Nashville, Tennessee 37202-5250
SIC Code: 2951
County Location: Morgan
County Status: Attainment for all criteria pollutants
Source Status: Synthetic Minor Source, FESOP Program
Minor Source, PSD Program

A.2 Emission Units and Pollution Control Summary

This stationary source consists of the following emission units and pollution control devices:

- (a) One (1) batch mixer capable of producing 220 tons per hour of asphalt, with PM and PM₁₀ emissions controlled by a baghouse (98-055) and exhausting through stack S1.
- (b) One (1) 65 million British thermal units per hour aggregate dryer, also with PM and PM₁₀ emissions controlled by a baghouse (98-055) and exhausting through stack S1, fired by natural gas, No. 2 distillate oil, No. 4 distillate oil or reused oil.
- (c) One (1) 1.74 million British thermal units per hour natural gas fired heater.

A.3 Insignificant Activities

This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(20):

- (1) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour.
- (2) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons.
- (3) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month.
- (4) A laboratory as defined in 326 IAC 2-7-1(20)(C).
- (5) 25,000 gallon AC oil tank (TV2), 25,000 gallon AC oil tank (TV3).
- (6) One (1) heavy fuel preheater heat exchanger with no burner.
- (7) Two (2) duplex strainers and associated piping.
- (8) One (1) twenty-five (25) gallon per minute oil pump.

SECTION D.1 FACILITY OPERATION CONDITIONS

One (1) batch mixer capable of producing 220 tons per hour of asphalt, with PM and PM₁₀ emissions controlled by a baghouse (98-055) and exhausting through stack S1.

One (1) 65 million British thermal units per hour aggregate dryer, also with PM and PM₁₀ emissions controlled by a baghouse (98-055) and exhausting through stack S1, fired by natural gas, No. 2 distillate oil, No. 4 distillate oil or reused oil.

One (1) 1.74 million British thermal units per hour natural gas fired heater.

Emissions Limitations and Standards [326 IAC 2-8-4(1)]

D.1.1 Particulate Matter (PM) [326 IAC 6-3-2] [326 IAC 2-2] [326 IAC 12-1] [40 CFR 60.90]

- (a) The particulate matter emissions from the aggregate dryer/mixer shall not exceed 0.253 pounds per ton of asphalt produced, when operating at the maximum asphalt production rate of 1,927,200 tons per year. This will limit the total potential to emit PM from the aggregate dryer/mixer to 244 tons per year, and the total source potential to emit PM to less than 250 tons per year. Therefore, PSD requirements (326 IAC 2-2) do not apply.
- (b) Pursuant to 40 CFR 60.92, the PM emissions from the aggregate dryer/mixer stack (S1) shall be limited to less than 90 milligrams per dry standard cubic foot (0.04 grains per dry standard cubic foot) and the opacity of emissions shall be less than twenty percent (20%).

D.1.2 Sulfur Dioxide Emission Limitations [326 IAC 7] [326 IAC 2-8-4]

- (a) Pursuant to 326 IAC 7-1.1 (SO₂ Emissions Limitations), the SO₂ emissions from the aggregate dryer shall not exceed five tenths (0.5) pounds per million British thermal unit heat input when operating on No. 2 distillate oil or No. 4 distillate oil. Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a thirty (30) day rolling weighted average.
- (b) Pursuant to 326 IAC 7-1.1 (SO₂ Emissions Limitations), the SO₂ emissions from the aggregate dryer shall not exceed one and six-tenths (1.6) pounds per million British thermal unit heat input when operating on reused oil. Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a thirty (30) day rolling weighted average.
- (c) The use of No. 2 distillate oil shall be limited to no more than 2,788,732 gallons per twelve (12) consecutive month period. Each gallon of No. 4 distillate oil used shall be considered equal to using 1 gallon of No. 2 distillate oil and each gallon of reused oil used shall be considered equal to using 0.76 gallons of No. 2 distillate oil. The sulfur content of the reused oil shall not exceed one half of a percent (0.5%) by weight and the sulfur content of the No. 2 and No. 4 distillate oils shall not exceed one half of a percent (0.5%) by weight. This will limit SO₂ emissions from the use of distillate oils or reused oil to less than 99 tons per year and the potential to emit SO₂ from the entire source to less than 100 tons per year. Therefore, the requirements of 326 IAC 2-7, Part 70, do not apply.

D.1.3 Particulate matter less than 10 microns (PM-10) [326 IAC 2-8-4]

Pursuant to 326 IAC 2-8-4, particulate matter - 10 microns (PM₁₀) emissions from the aggregate dryer/mixer shall not exceed 0.102 pounds per ton of asphalt produced, when operating at the maximum asphalt production rate of 1,927,200 tons per year. This will limit the total potential to emit PM₁₀ from the aggregate dryer/mixer to less than 99.0 tons per year, and the total source potential to emit PM₁₀ to less than 100 tons per year. Therefore, the Part 70 rules (326 IAC 2-7) do not apply.

D.1.4 Preventive Maintenance [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Condition B.13 of this permit, is required for these

facilities.

Compliance Determination Requirements

D.1.5 Particulate Matter Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

- (a) During the period between 60 days and 180 days of beginning the use of any fuel other than natural gas, the Permittee shall perform PM and PM₁₀ testing utilizing methods approved by the Commissioner. This test shall be repeated at least once every five years from the date of this valid compliance demonstration. PM₁₀ includes filterable and condensable PM₁₀.

A test protocol shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

at least thirty-five (35) days before the intended test date. The Permittee shall develop and submit for approval with the protocol, standard operating procedures to be followed during sampling, handling, analysis, quality control, quality assurance, and data reporting.

- (b) The Permittee shall perform particulate emissions testing on the aggregate dryer/ mixer every five (5) years in accordance with IDEM requirements.
- (c) Pursuant to 40 CFR 60.93, compliance with the PM standards in 40 CFR 60.92 shall be determined by using Method 5 to determine particulate concentration and Method 9 to determine opacity. When determining the particulate concentration, the sampling time and sampling volume for each run shall be at least 60 minutes and 0.90 dry standard cubic meters (31.8 dry standard cubic feet).

D.1.6 Particulate Matter

In order to comply with Conditions D.1.1 and D.1.3, the baghouse for the aggregate dryer/mixer shall be in operation at all times when the aggregate dryer/mixer is in operation.

D.1.7 Sulfur Dioxide Emissions and Sulfur Content

Compliance shall be determined utilizing one of the following options.

- (a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed five-tenths (0.5) pounds per million British thermal unit heat input when operating on No. 2 distillate oil or No. 4 distillate oil and one and six-tenths (1.6) pounds per million British thermal unit heat input when operating on reused oil by:
- (1) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification; or
- (2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
- (A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
- (B) If a partially empty fuel tank is refilled, a new sample and analysis would be

required upon filling.

- (b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the aggregate dryer/mixer, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.
- (c) In order to demonstrate compliance with Condition D.1.2(c), the Permittee shall demonstrate that weight percent sulfur dioxide in the fuels used does not exceed one half of a percent (0.5%) by weight when operating on No. 2 distillate oil, No. 4 distillate oil or reused oil, using the methods described in (a) of this condition.

A determination of noncompliance pursuant to any of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

D.1.8 Used Oil Requirements [329 IAC 13]

The reused oil burned in the aggregate dryer/mixer shall comply with the used oil requirements specified in 329 IAC 13 (Used Oil Management). Pursuant to 329 IAC 13-3-2 (Used Oil Specifications), used oil burned for energy recovery that is classified as off-specification used oil fuel shall comply with the provisions of 329 IAC 13-8 (Used Oil Burners Who Burn Off-specification Used Oil For Energy Recovery), including:

- (a) Receipt of an EPA identification number as outlined in 329 IAC 13-8-3 (Notification),
- (b) Compliance with the used oil storage requirements specified in 329 IAC 13-8-5 (Used Oil Storage), and
- (c) Maintaining records pursuant to 329 IAC 13-8-6 (Tracking).

The burning of mixtures of used oil and hazardous waste that is regulated under 329 IAC 3.1 is prohibited at this source.

Compliance Monitoring Requirements [326 IAC 2-8-5(a)(1)] [326 IAC 2-8-4]

D.1.9 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouse and the inlet temperature of the baghouse used in conjunction with the aggregate dryer/mixer, at least once per shift while the dryer/mixer is in operation, when venting to the atmosphere. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 3.0 and 5.0 inches of water and the inlet temperature to the baghouse shall be maintained within a range of 200 and 400 degrees Fahrenheit (to prevent overheating of the bags and to prevent low temperatures from mudding up the bags) or ranges established during the latest stack test. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when the pressure reading or inlet temperature is outside of the above mentioned range for any one reading. Failure to take response steps in accordance with Section C - Failure to Take Corrective Action, shall be considered a violation of this permit.

The instrument used for determining the pressure shall comply with Condition C.14 - Pressure Gauge Specifications, be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months. The instrument employed for measuring temperature shall also have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ($\pm 2\%$) of full scale reading. The Permittee may

request the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement.

D.1.10 Visible Emissions Notations

- (a) Visible emission notations of the aggregate dryer/mixer stack (S1) exhaust shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) Daily visible emission notations of the conveyers, material transfer points, aggregate storage piles, and unpaved roads shall be performed during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (c) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (d) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (e) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (f) The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Failure to Take Corrective Action, shall be considered a violation of this permit.

D.1.11 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the aggregate dryer/mixer when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

D.1.12 Broken or Failed Bag Detection

In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provision). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Preventive Maintenance Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Preventive Maintenance Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Failure to Take Corrective Action, shall be considered a violation of this permit., shall be considered a violation of this permit.
- (b) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may

continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provision).

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.1.13 Record Keeping Requirements

- (a) To document compliance with Conditions D.1.2 and D.1.7, the Permittee shall maintain records in accordance with (1) through (4) below.

- (1) Calendar dates covered in the compliance determination period;
- (2) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period, the natural gas fired boiler certification does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1); and

If the fuel supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:

- (3) The name of the fuel supplier; and
 - (4) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.
- (b) To document compliance with Condition D.1.2, the Permittee shall maintain records of the actual usage of No. 2 distillate oil, No. 4 distillate oil and reused oil used since the last compliance determination period and equivalent sulfur dioxide emissions.
- (c) To document compliance with Condition D.1.10, the Permittee shall maintain records of visible emission notations of the aggregate dryer/mixer stack exhaust once per shift and of the conveyers, material transfer points, aggregate storage piles, and unpaved roads once per day.
- (d) To document compliance with Condition D.1.9, the Permittee shall maintain records of the pressure drop and inlet temperature readings from the baghouse controlling the aggregate drying operation once per shift during normal operation when venting to the atmosphere.
- (e) To document compliance with Condition D.1.11, the Permittee shall maintain records of the results of the inspections required under Condition D.1.11 and the dates the vents are redirected.
- (f) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.14 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.1.2(c) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION**

FESOP Quarterly Report

Source Name: Rogers Group, Inc. - Martinsville Asphalt
Source Address: 1500 Rogers Road, Martinsville, Indiana 46151
Mailing Address: P.O. Box 25250, Nashville, Tennessee 37202-5250
FESOP No.: F 109-7580-03217
SPR No.: 109-15127-03217
Facility: One (1) aggregate dryer burner
Parameter: SO₂ emissions; fuel usage
Limit: No. 2 distillate oil shall be limited to no more than 2,788,732 gallons per twelve (12) consecutive month period. Each gallon of No. 4 distillate oil used shall be considered equal to using 1 gallon of No. 2 distillate oil and each gallon of reused oil used shall be considered equal to using 0.76 gallons of No. 2 distillate oil.

YEAR: _____

Month	No. 2 distillate oil usage plus equivalent of No. 4 distillate oil and reused oil to No. 2 distillate oil	No. 2 distillate oil usage plus equivalent of No. 4 distillate oil and reused oil to No. 2 distillate oil	No. 2 distillate oil usage plus equivalent of No. 4 distillate oil and reused oil to No. 2 distillate oil
	This Month	Previous 11 Months	12 Month Total

- 9 No deviation occurred in this quarter.
9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

January 25, 2002

Indiana Department of Environmental Management Office of Air Quality

Technical Support Document (TSD) for a Significant Permit Revision to a Federally Enforceable State Operating Permit

Source Background and Description

Source Name:	Rogers Group, Inc. - Martinsville Asphalt
Source Location:	1500 Rogers Road, Martinsville, Indiana 46151
County:	Morgan
SIC Code:	2951
Operation Permit No.:	F 109-7580-03217
Operation Permit Issuance Date:	July 1, 1997
Significant Permit Revision No.:	SPR 109-15127-03217
Permit Reviewer:	CarrieAnn Paukowits

The Office of Air Quality (OAQ) has reviewed a significant permit revision application from Rogers Group, Inc. - Martinsville Asphalt relating to the construction and operation of the following emission units and pollution control devices:

The proposed revision is for the use of No. 2 distillate oil, No. 4 distillate oil and reused oil, in addition to natural gas, at the one (1) aggregate dryer. This source was previously permitted to operate on natural gas, only. The source was permitted to operate while using a cyclone and scrubber to control PM and PM₁₀ emissions. The cyclone and scrubber were replaced with a baghouse. The replacement did not require approval by IDEM, OAQ, and emissions from the baghouse were tested on July 24, 1998. The equipment list will be revised to appear as follows:

- (a) One (1) batch mixer capable of producing 220 tons per hour of asphalt, with PM and PM₁₀ emissions controlled by a baghouse (98-055) and exhausting through stack S1.
- (b) One (1) 65 million British thermal units per hour aggregate dryer, also with PM and PM₁₀ emissions controlled by a baghouse (98-055) and exhausting through stack S1, fired by natural gas, No. 2 distillate oil, No. 4 distillate oil or reused oil.
- (c) One (1) 1.74 million British thermal units per hour natural gas fired heater.

To make this modification possible, the following insignificant activities are also being added:

- (a) One (1) heavy fuel preheater heat exchanger with no burner.
- (b) Two (2) duplex strainers and associated piping.
- (c) One (1) twenty-five (25) gallon per minute oil pump.

History

On November 1, 2001, Rogers Group, Inc. - Martinsville Asphalt submitted an application to the OAQ requesting the use of No. 2 distillate oil, No. 4 distillate oil and reused oil, in addition to natural gas, at the one (1) aggregate dryer. Rogers Group, Inc. - Martinsville Asphalt was issued a Federally

Enforceable State Operating Permit (FESOP) (F 109-7580-03217) on July 1, 1997.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (EF)
S1	Existing stack for the aggregate dryer	22.0	4.00	60,000	250

Recommendation

The staff recommends to the Commissioner that the FESOP Significant Permit Revision be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on November 1, 2001. Additional information was received on November 14 and November 15, 2001.

Emission Calculations

See pages 1 through 5 of 5 of Appendix A of this document for detailed emissions calculations.

Potential To Emit of Revision

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA."

This table reflects the PTE before controls for this revision. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	82.9
PM ₁₀	71.6
SO ₂	146
VOC	2.09
CO	10.3
NO _x	41.3

HAPS	Potential To Emit (tons/year)
Individual	less than 10
TOTAL	less than 25

Justification for Revision

The potentials to emit particulate matter (PM), particulate matter with an aerodynamic diameter less than or equal to ten (10) micrometers (PM₁₀), Sulfur dioxide (SO₂), and nitrogen oxides (NO_x) are greater than or equal to twenty-five (25) tons per year. Therefore, the FESOP is being revised through a FESOP Significant Permit Revision pursuant to 326 IAC 2-8-11.1 (f)(1)(E).

County Attainment Status

The source is located in Morgan County.

Pollutant	Status
PM ₁₀	attainment
SO ₂	attainment
NO ₂	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Morgan County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Morgan County has been classified as attainment or unclassifiable for all remaining criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Source Status

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	249
PM ₁₀	34.9
SO ₂	0.175
VOC	0.818
CO	10.2
NO _x	1.07

- (a) This existing source is not a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the 28 listed source categories.
- (b) These emissions are based upon the limited potential to emit table in the Technical Support Document (TSD) for FESOP F 109-7580-03217, issued on July 1, 1997.

Potential to Emit of Revision After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this FESOP revision.

	Potential to Emit (tons/year)						
Process/facility	PM	PM ₁₀	SO ₂	VOC	CO	NO _x	HAPS
Proposed Revision	0.083	0.072	99.0	2.09	10.3	41.3	--
Dryer emissions from natural gas	0.001	0.002	0.171	1.57	23.9	28.5	--
Worst case dryer burner emissions	0.083	0.072	99.2	2.09	23.9	41.3	--
Existing source excluding dryer burner emissions	249	99.6	0.005	0.021	0.267	1.09	5.59
Total (Worst case of dryer emissions plus existing source excluding dryer emissions)	less than 250	less than 100	less than 100	2.11	24.2	42.4	5.59
FESOP Threshold Level	--	100	100	100	100	100	10 individual 25 total
PSD Threshold Level	250	250	250	250	250	250	-

- (a) This revision to an existing minor stationary source is not major because the emission increase is less than the PSD threshold levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.
- (b) This revision to an existing minor stationary source will not make the source a major source pursuant to 326 IAC 2-2 and 40 CFR 52.21, PSD, because the potential to emit each criteria pollutant will remain less than 250 tons per year.
- (c) This revision to the existing FESOP will not change the status of the stationary source because the emissions from the entire source will still be limited to less than the Part 70 major source thresholds.

Federal Rule Applicability

- (a) This change in the fuels used will make the batch mix asphalt manufacturing source subject to the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.90, Subpart I) because, the change is considered a modification and is taking place in 2001, which is after the June 11, 1973 applicability date of this subpart. A modification is defined by 40 CFR 60.2 as, "any physical change in, or change in the method of operation of, an existing facility which increases the amount of any air pollutant (to which a standard applies) emitted into the atmosphere by that facility or which results in the emission of any air pollutant (to which a standard applies) into the atmosphere not previously emitted." Since the potential to emit PM is increasing by 0.002 pounds per hour, the actual emissions of PM are expected to increase by 0.002 pounds per hour, when operating at maximum capacity. The hot mix asphalt plant will be required to comply with the following:
 - (1) Pursuant to 40 CFR 60.93, performance tests are required as specified in this Subpart and as outlined in Part 60.8 (copy enclosed).
 - (2) Pursuant to 40 CFR 60.92, on or after the date on which the performance tests are completed, no owner or operator subject to the provisions of Subpart I shall discharge into the atmosphere from any affected facility any gases which:
 - (A) Contain particulate matter in excess of 90 milligrams per dry standard cubic foot (0.04 grains per dry standard cubic foot).
 - (B) Exhibit 20 percent opacity, or greater.

As a result of the performance tests conducted on July 24, 1998, in accordance with F 109-7580-03217, issued on July 1, 1997, the maximum PM concentration in any of the three (3) test runs was 0.005 grains per dry standard cubic foot $[(1.26 \text{ lbs/hr} \times 7,000 \text{ gr/lb}) / (31,675.33 \text{ dscfm} \times 60 \text{ min/hr})]$, which is significantly less than 0.04 grains per dry standard cubic foot. Since the only increase in PM emissions is 0.002 pounds per hour from combustion, the hot mix asphalt plant will comply with this rule. As calculated on page 4 of 5 of TSD Appendix A, the source will also comply with the requirements of this rule based on control equipment parameters supplied by the manufacturer and the potential to emit after control by the baghouse. Pursuant to 40 CFR 60.93, an initial performance test is required between 60 and 180 days of beginning the use of any fuel other than natural gas.

- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14, 326 IAC 20, 40 CFR Part 61 and 40 CFR Part 63) applicable to this proposed revision.

State Rule Applicability - Individual Facilities

326 IAC 2-2 (Prevention of Significant Deterioration)

The potential to emit PM is greater than 250 tons per year for this modification. Pursuant to F 109-7580-03217, issued on July 1, 1997, the PM emissions from the aggregate dryer/mixer are limited to 55.5 pounds per hour. In order to allow for more flexibility, while ensuring that this source is not subject to 326 IAC 2-2, this limit has been revised to an annual limit. The unrestricted potential to emit PM from the total of all facilities at this source, other than the aggregate dryer/mixer is 5.40 tons per year. Therefore, the potential to emit PM from the aggregate dryer/mixer shall not exceed 0.253 pounds per ton of asphalt produced, when operating at the maximum asphalt production rate of 1,927,200 tons per year. This will limit the total potential to emit PM from the aggregate dryer/mixer to 244 tons per year, and the total source potential to emit PM to less than 250 tons per year. Since the potential to emit PM after control by the baghouse is 30.9 tons per year or 0.03 pounds of PM per ton of asphalt produced from the aggregate dryer/mixer, compliance with this emission limitation is accomplished by using the baghouse (98-055) as control. Thus the requirements of 326 IAC 2-2, PSD, are not applicable.

326 IAC 2-8-4 (FESOP)

- (a) Pursuant to this rule and F 109-7580-03217, issued on July 1, 1997, the PM₁₀ emissions from the aggregate dryer/mixer shall not exceed 7.81 pounds per hour and the PM₁₀ from the entire plant shall not exceed 7.97 pounds per hour or 0.036 pounds per ton of asphalt produced. In order to allow for more flexibility, while ensuring compliance with 326 IAC 2-8-4, this limit has been revised to an annual limit. The unrestricted potential to emit PM₁₀ from the total of all facilities at this source, other than the aggregate dryer/mixer is 0.663 tons per year. Therefore, the potential to emit PM₁₀ from the aggregate dryer/mixer shall not exceed 0.102 pounds per ton of asphalt produced, when operating at the maximum asphalt production rate of 1,927,200 tons per year. This will limit the total potential to emit PM₁₀ from the aggregate dryer/mixer to less than 99.0 tons per year, and the total source potential to emit PM₁₀ to less than 100 tons per year. Since the potential to emit PM₁₀ after control by the baghouse is 4.41 tons per year or 0.005 pounds of PM₁₀ per ton of asphalt produced from the aggregate dryer/mixer, compliance with this emission limitation is accomplished by using the baghouse (98-055) as control. Operation of the baghouse (98-055) at all times shall ensure compliance with this limit. Therefore, the requirements of 326 IAC 2-7 do not apply.
- (b) The potential to emit SO₂ from this modification is greater than 100 tons per year. The use of No. 2 distillate oil shall be limited to no more than 2,788,732 gallons per twelve (12) consecutive month period. Each gallon of No. 4 distillate oil used shall be considered equal to using 1 gallon of No. 2 distillate oil and each gallon of reused oil used shall be considered equal to using 0.76 gallons of No. 2 distillate oil. The sulfur content of the reused oil shall not exceed one half of a percent (0.5%) by weight and the sulfur content of the No. 2 and No. 4 distillate oils shall not exceed one half of a percent (0.5%) by weight. This will limit SO₂ emissions from the use of distillate oils or reused oil to 99.0 tons per year and the potential to emit SO₂ from the entire source to less than 100 tons per year. Therefore, the requirements of 326 IAC 2-7 do not apply.
- (c) Since the unrestricted potential to emit NO_x is less than 100 tons per year, there is no limit on NO_x emissions.

326 IAC 6-3-2 (Particulate Emissions Limitations for process operations)

The asphalt manufacturing operations were subject to 326 IAC 6-3, Particulate Emission Limitations. Pursuant to 326 IAC 6-3-1(b)(2), if any limitation established by 326 IAC 12 concerning new source performance standards then the limitation contained in 326 IAC 6-3-2 shall not apply, but the limit in such 326 IAC 12 shall apply. Since this source is now subject to 40 CFR 60.90, Subpart I, Standards of Performance for Hot Mix Asphalt Facilities, the requirements of 326 IAC 6-3-2 no longer apply.

326 IAC 7 (Sulfur Dioxide Rules)

Since the potential to emit SO₂ from the dryer burner is twenty-five (25) tons per year or more as a result of this modification, the requirements of 326 IAC 7-1.1 are applicable.

- (a) When operating on No. 2 or No. 4 distillate oil, the sulfur dioxide emissions shall be limited to five-tenths (0.5) pound per million British thermal units. Compliance with this limitation shall be accomplished by limiting the weight percent sulfur in the No. 2 distillate oil and the No. 4 distillate oil to no more than one half of one percent (0.5%).
- (b) When operating on reused oil, the sulfur dioxide emissions shall be limited to one and six tenths (1.6) pounds per million British thermal units. Compliance with this limitation shall be accomplished by limiting the weight percent sulfur in the reused oil to no more than two percent (2%).

326 IAC 12-1 (New Source Performance Standards)

The hot mix asphalt plant will be required to comply with the requirements of 40 CFR 60.90, Subpart I, Standards of Performance for Hot Mix Asphalt Facilities, as described in the "Federal Rule Applicability" section of this TSD.

Compliance Requirements

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this modification are as follows:

- (a) The Permittee shall record the total static pressure drop across the baghouse and the inlet temperature of the baghouse used in conjunction with the aggregate dryer/mixer, at least

once per shift while the dryer/mixer is in operation, when venting to the atmosphere. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 3.0 and 5.0 inches of water and the inlet temperature to the baghouse shall be maintained within a range of 200 and 400 degrees Fahrenheit (to prevent overheating of the bags and to prevent low temperatures from mudding up the bags) or ranges established during the latest stack test. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when the pressure reading or inlet temperature is outside of the above mentioned range for any one reading. Failure to take response steps in accordance with Section C - Failure to Take Corrective Action, shall be considered a violation of this permit.

- (b) Visible emission notations of the aggregate dryer/mixer stack (S1) exhaust shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal. Daily visible emission notations of the conveyers, material transfer points, aggregate storage piles, and unpaved roads shall be performed during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal. For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Failure to Take Corrective Action, shall be considered a violation of this permit.
- (c) An inspection shall be performed each calendar quarter of all bags controlling the aggregate dryer/mixer when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.
- (d) In the event that bag failure has been observed:
 - (1) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B-Emergency Provision). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Preventive Maintenance Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Preventive Maintenance Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Failure to Take Corrective Action, shall be considered a violation of this permit., shall be considered a violation of this permit.
 - (2) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee

satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provision)

These monitoring conditions are necessary because the baghouse controlling PM and PM₁₀ emissions from the aggregate dryer/mixer must operate properly to ensure compliance with 326 IAC 6-3 (Process Operations), 40 CFR Part 60.90 and 326 IAC 2-8 (FESOP), and keep the requirements of 326 IAC 2-2 (PSD) not applicable.

Testing Requirements

Pursuant to F 109-7580-03217, issued on July 1, 1997, the Permittee is required to perform PM and PM₁₀ testing of the aggregate dryer every five (5) years. Pursuant to 40 CFR 60.93, an initial performance test is required between 60 and 180 days of beginning the use of any fuel other than natural gas. Pursuant to 40 CFR 60.93, compliance with the PM standards in 40 CFR 60.92 shall be determined by using Method 5 to determine particulate concentration and Method 9 to determine opacity. When determining the particulate concentration, the sampling time and sampling volume for each run shall be at least 60 minutes and 0.90 dry standard cubic meters (31.8 dry standard cubic feet).

Proposed Changes

The permit language is changed to read as follows (deleted language appears as ~~strikeouts~~, new language appears in bold):

A.2 Emission Units and Pollution Control Summary

This stationary source consists of the following emission units and pollution control devices:

- (a) One (1) batch mixer capable of producing 220 tons per hour of asphalt, **with PM and PM₁₀ emissions controlled by a baghouse (98-055)** and exhausting through ~~a cyclone (CE2) and scrubber (CE1) and exiting through stack S1.~~
- (b) One (1) 65 million British thermal units per hour ~~natural gas fired~~ aggregate dryer, also **with PM and PM₁₀ emissions controlled by a baghouse (98-055) and** exhausting through ~~a cyclone (CE2) and scrubber (CE1) and exiting through stack S1,~~ **fired by natural gas, No. 2 distillate oil, No. 4 distillate oil or reused oil.**
- (c) ~~One (1) cyclone (CE2) with an air flow rate of 62,900 actual cubic feet per minute.~~
- (d) ~~One (1) exhaust washer Venturi scrubber (CE1) with a water flow rate of 300 gallons per minute.~~
- (e) One (1) 1.74 million British thermal units per hour natural gas fired heater.

A.3 Insignificant Activities

This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(20):

- (1) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour.
- (2) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons.

- (3) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month.
- (4) A laboratory as defined in 326 IAC 2-7-1(20)(C).
- (5) 25,000 gallon AC oil tank (TV2), 25,000 gallon AC oil tank (TV3).
- (6) **One (1) heavy fuel preheater heat exchanger with no burner.**
- (7) **Two (2) duplex strainers and associated piping.**
- (8) **One (1) twenty-five (25) gallon per minute oil pump.**

SECTION D.1 FACILITY OPERATION CONDITIONS

One (1) batch mixer capable of producing 220 tons per hour of asphalt, **with PM and PM₁₀ emissions controlled by a baghouse (98-055)** and exhausting through ~~a cyclone (CE2) and scrubber (CE1) and exiting through stack S1.~~

One (1) 65 million British thermal units per hour ~~natural gas fired~~ aggregate dryer, also **with PM and PM₁₀ emissions controlled by a baghouse (98-055)** and exhausting through ~~a cyclone (CE2) and scrubber (CE1) and exiting through stack S1,~~ **fired by natural gas, No. 2 distillate oil, No. 4 distillate oil or reused oil.**

~~One (1) cyclone (CE2) with an air flow rate of 62,900 actual cubic feet per minute.~~

~~One (1) exhaust washer Venturi scrubber (CE1) with a water flow rate of 300 gallons per minute.~~

~~One (1) 1.74 million British thermal units per hour natural gas fired heater.~~

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.1.1 Particulate Matter (PM) [326 IAC 6-3-2] [326 IAC 2-2] [326 IAC 12-1] [40 CFR 60.90]

- (a) ~~Pursuant to 326 IAC 6-3-2, The particulate matter emissions from the aggregate dryer/mixer shall not exceed 55.5 pounds per hour and particulate matter emissions from the entire asphalt plant shall not exceed 56.8 pounds per hour~~ **0.253 pounds per ton of asphalt produced, when operating at the maximum asphalt production rate of 1,927,200 tons per year. This will limit the total potential to emit PM from the aggregate dryer/mixer to 244 tons per year, and the total source potential to emit PM to less than 250 tons per year. Therefore, PSD requirements (326 IAC 2-2) do not apply. Therefore, 326 IAC 2-2 is not applicable.**
- (b) **Pursuant to 40 CFR 60.92, the PM emissions from the aggregate dryer/mixer stack (S1) shall be limited to less than 90 milligrams per dry standard cubic foot (0.04 grains per dry standard cubic foot) and the opacity of emissions shall be less than twenty percent (20%).**

~~D.1.2 Visible Emissions~~

~~Visible emissions shall not exceed an average of forty percent opacity in twenty-four (24) consecutive readings. Visible emissions shall not exceed sixty percent opacity for more than a cumulative total of fifteen (15) minutes (60 readings) in a six (6) hour period.~~

D.1.2 Sulfur Dioxide Emission Limitations [326 IAC 7] [326 IAC 2-8-4]

- (a) **Pursuant to 326 IAC 7-1.1 (SO₂ Emissions Limitations) the SO₂ emissions from the aggregate dryer shall not exceed five tenths (0.5) pounds per million British thermal**

unit heat input when operating on No. 2 distillate oil or No. 4 distillate oil. Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a thirty (30) day rolling weighted average.

- (b) Pursuant to 326 IAC 7-1.1 (SO₂ Emissions Limitations) the SO₂ emissions from the aggregate dryer shall not exceed one and six-tenths (1.6) pounds per million British thermal unit heat input when operating on reused oil. Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a thirty (30) day rolling weighted average.
- (c) The use of No. 2 distillate oil shall be limited to no more than 2,788,732 gallons per twelve (12) consecutive month period. Each gallon of No. 4 distillate oil used shall be considered equal to using 1 gallon of No. 2 distillate oil and each gallon of reused oil used shall be considered equal to using 0.76 gallons of No. 2 distillate oil. The sulfur content of the reused oil shall not exceed one half of a percent (0.5%) by weight and the sulfur content of the No. 2 and No. 4 distillate oils shall not exceed one half of a percent (0.5%) by weight. This will limit SO₂ emissions from the use of distillate oils or reused oil to less than 99 tons per year and the potential to emit SO₂ from the entire source to less than 100 tons per year. Therefore, the requirements of 326 IAC 2-7, Part 70, do not apply.

D.1.3 Particulate matter less than 10 microns (PM-10) [326 IAC 2-8-4]

Pursuant to 326 IAC 2-8-4, particulate matter - 10 microns (PM₁₀) emissions from the aggregate dryer/mixer shall not exceed ~~7.81 pounds per hour, and particulate matter - 10 microns emissions from the entire asphalt plant shall not exceed 7.97 pounds per hour~~ **0.102 pounds per ton of asphalt produced, when operating at the maximum asphalt production rate of 1,927,200 tons per year. This will limit the total potential to emit PM₁₀ from the aggregate dryer/mixer to less than 99.0 tons per year, and the total source potential to emit PM₁₀ to less than 100 tons per year.** Therefore, the Part 70 rules (326 IAC 2-7) do not apply.

D.1.74 Preventive Maintenance [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Condition B.13 of this permit, is required for these facilities.

Testing Requirements ~~[326 IAC 2-8-4(3)]~~ Compliance Determination Requirements

D.1.45 Particulate Matter Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

- (a) During the period between 60 days and 180 days **of beginning the use of any fuel other than natural gas, after issuance of this permit**, the Permittee shall perform PM and PM₁₀ testing utilizing methods approved by the Commissioner. This test shall be repeated at least once every five years from the date of this valid compliance demonstration. PM₁₀ includes filterable and condensable PM₁₀.

A test protocol shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air ~~Management~~ **Quality**
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

at least thirty-five (35) days before the intended test date. The Permittee shall develop and submit for approval with the protocol, standard operating procedures to be followed during sampling, handling, analysis, quality control, quality assurance, and data reporting.

- (b) The Permittee shall perform particulate emissions testing on the aggregate dryer/mixer every five (5) years in accordance with IDEM requirements.
- (c) Pursuant to 40 CFR 60.93, compliance with the PM standards in 40 CFR 60.92 shall be determined by using Method 5 to determine particulate concentration and Method 9 to determine opacity. When determining the particulate concentration, the sampling time and sampling volume for each run shall be at least 60 minutes and 0.90 dry standard cubic meters (31.8 dry standard cubic feet).

D.1.6 Particulate Matter

In order to comply with Conditions D.1.1 and D.1.3, the baghouse for the aggregate dryer/mixer shall be in operation at all times when the aggregate dryer/mixer is in operation.

D.1.7 Sulfur Dioxide Emissions and Sulfur Content

Compliance shall be determined utilizing one of the following options.

- (a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed five-tenths (0.5) pounds per million British thermal unit heat input when operating on No. 2 distillate oil or No. 4 distillate oil and one and six-tenths (1.6) pounds per million British thermal unit heat input when operating on reused oil by:
 - (1) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification; or
 - (2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
 - (A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
 - (B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.
- (b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the aggregate dryer/mixer, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.
- (c) In order to demonstrate compliance with Condition D.1.2(c), the Permittee shall demonstrate that weight percent sulfur dioxide in the fuels used does not exceed one half of a percent (0.5%) by weight when operating on No. 2 distillate oil, No. 4 distillate oil or reused oil, using the methods described in (a) of this condition.

A determination of noncompliance pursuant to any of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

D.1.8 Used Oil Requirements [329 IAC 13]

The reused oil burned in the aggregate dryer/mixer shall comply with the used oil requirements specified in 329 IAC 13 (Used Oil Management). Pursuant to 329 IAC 13-3-2 (Used Oil Specifications), used oil burned for energy recovery that is classified as off-specification used oil fuel shall comply with the provisions of 329 IAC 13-8 (Used Oil Burners Who Burn Off-specification Used Oil For Energy Recovery), including:

- (a) Receipt of an EPA identification number as outlined in 329 IAC 13-8-3 (Notification),
- (b) Compliance with the used oil storage requirements specified in 329 IAC 13-8-5 (Used Oil Storage), and
- (c) Maintaining records pursuant to 329 IAC 13-8-6 (Tracking).

The burning of mixtures of used oil and hazardous waste that is regulated under 329 IAC 3.1 is prohibited at this source.

Compliance Assurance Monitoring Requirements [326 IAC 2-8-5(a)(1)] [326 IAC 2-8-4]

D.1.59 Pressure and Water Flow Rate Readings Parametric Monitoring

The Permittee shall **record the total static pressure drop across the baghouse and the inlet temperature of the baghouse used in conjunction with the aggregate dryer/mixer take pressure and scrubbing liquid (water) flow rate readings from the scrubber controlling the aggregate drying operation**, at least once per shift while the dryer/mixer is in operation, **when venting to the atmosphere**. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the **baghouse scrubber** shall be maintained within the range of **6.0 and 10.0 3.0 and 5.0** inches of water **and the inlet temperature to the baghouse shall be maintained within a range of 200 and 400 degrees Fahrenheit (to prevent overheating of the bags and to prevent low temperatures from mudding up the bags)** and the flow rate for scrubbing liquid shall be maintained at approximately 300 gallons of water per minute or a range and flow rate established during the latest stack test. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when the pressure reading or scrubbing liquid (water) flow rate **inlet temperature** is outside of the above mentioned range for any one reading. **Failure to take response steps in accordance with Section C - Failure to Take Corrective Action, shall be considered a violation of this permit.**

The instrument used for determining the pressure shall comply with Condition C.14 - Pressure Gauge Specifications, be subject to approval by IDEM, **OAQ OAM**, and shall be calibrated at least once every six (6) months. **The instrument employed for measuring temperature shall also have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (±2%) of full scale reading. The Permittee may request the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement.**

D.1.61 Daily and Weekly Visible Emissions Observations Notations

- ~~(a) That the Permittee shall perform daily visible emissions observations consistent with a method approved by the OAM to determine compliance with operation condition D.1.2.~~
- (a) **Visible emission notations of the aggregate dryer/mixer stack (S1) exhaust shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.**
- ~~(b) That the Permittee shall perform weekly visible emissions observations on the scrubber, cyclone, scavenger system ductwork and associated component (e.g., hoppers, etc.) for evidence of fugitive emissions, holes, corrosion, and the like. This does not require the use of a certified visible emissions reader.~~

~~In the event that visible emissions are detected above the limit required by operation condition D.1.2 or any visible emissions are detected on the external cyclone and scrubber components, the Corrective Action Contingency Plan shall be implemented. Corrective action shall be taken within 8 hours of discovery. If the initial corrective action plan does not correct the problem, then additional corrective actions shall be devised within 8 hours of discovery and shall include a timetable for completion. The corrective actions shall be implemented immediately in accordance with those timetables.~~ **Daily visible emission notations of the conveyers, material transfer points, aggregate storage piles, and unpaved roads shall be performed during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.**

- (c) **For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.**
- (d) **In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.**
- (e) **A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.**
- (f) **The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Failure to Take Corrective Action, shall be considered a violation of this permit.**

D.1.11 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the aggregate dryer/mixer when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

D.1.12 Broken or Failed Bag Detection

In the event that bag failure has been observed:

- (a) **For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provision). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Preventive Maintenance Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Preventive Maintenance Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Failure to Take Corrective Action, shall be considered a violation of this permit., shall be considered a violation of this permit.**
- (b) **For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Opera-**

tions may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provision).

D.1.8 Periodic Emissions Testing

~~That the Permittee shall perform particulate emissions testing on the aggregate mixer and dryer burner every 5 years in accordance with IDEM requirements.~~

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.1.13 Record Keeping Requirements

(a) To document compliance with Conditions D.1.2 and D.1.7, the Permittee shall maintain records in accordance with (1) through (4) below.

- (1) Calendar dates covered in the compliance determination period;**
- (2) ~~Amount of waste oil used (expressed in gallons)~~ A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period, the natural gas fired boiler certification does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1); and**

If the fuel supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:

- (3) The name of the fuel supplier; and**
 - (4) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.**
- (b) To document compliance with Condition D.1.2, the Permittee shall maintain records of the actual usage of No. 2 distillate oil, No. 4 distillate oil and reused oil used since the last compliance determination period and equivalent sulfur dioxide emissions.**
 - (c) To document compliance with Condition D.1.10, the Permittee shall maintain records of visible emission notations of the aggregate dryer/mixer stack exhaust once per shift and of the conveyers, material transfer points, aggregate storage piles, and unpaved roads once per day.**
 - (d) To document compliance with Condition D.1.9, the Permittee shall maintain records of the pressure drop and inlet temperature readings from the baghouse controlling the aggregate drying operation once per shift during normal operation when venting to the atmosphere.**
 - (e) To document compliance with Condition D.1.11, the Permittee shall maintain records of the results of the inspections required under Condition D.1.11 and the dates the vents are redirected.**
 - (f) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.**

D.1.14 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.1.2(c) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “authorized individual” as defined by 326 IAC 2-1.1-1(1).

The following report form has been added to the permit:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION**

FESOP Quarterly Report

Source Name: Rogers Group, Inc. - Martinsville Asphalt
Source Address: 1500 Rogers Road, Martinsville, Indiana 46151
Mailing Address: P.O. Box 25250, Nashville, Tennessee 37202-5250
FESOP No.: F 109-7580-03217
SPR No.: 109-15127-03217
Facility: One (1) aggregate dryer burner
Parameter: SO₂ emissions; fuel usage
Limit: No. 2 distillate oil shall be limited to no more than 2,788,732 gallons per twelve (12) consecutive month period. Each gallon of No. 4 distillate oil used shall be considered equal to using 1 gallon of No. 2 distillate oil and each gallon of reused oil used shall be considered equal to using 0.76 gallons of No. 2 distillate oil.

YEAR: _____

Month	No. 2 distillate oil usage plus equivalent of No. 4 distillate oil and reused oil to No. 2 distillate oil	No. 2 distillate oil usage plus equivalent of No. 4 distillate oil and reused oil to No. 2 distillate oil	No. 2 distillate oil usage plus equivalent of No. 4 distillate oil and reused oil to No. 2 distillate oil
	This Month	Previous 11 Months	12 Month Total

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

Conclusion

The construction and operation of this proposed revision shall be subject to the conditions of the attached proposed FESOP Significant Permit Revision No. 109-15127-03217.

Appendix A: Emission Calculations

Company Name: Rogers Group, Inc. - Martinsville Asphalt
Plant Location: 1500 Rogers Road, Martinsville, Indiana 46151
County: Morgan
SPR: 109-15127
Plt. ID: 109-03217
Date: November 1, 2001
Permit Reviewer: CarrieAnn Paukowits

I. Potential Emissions

Dryer Burner (gas/<100MMBTU/uncontrolled)

Already permitted

The following calculations determine the amount of emissions created by natural gas combustion, based on 8760 hours of use, AP-42 Ch. 1.4, Tables 1.4-1, 1.4-2, 1.4-3

Pollutant:	<u>65.0 MMBtu/hr * 8760 hrs/yr</u>	* Ef (lbs/MMcf) = (tons/yr)
	1000 Btu/cf * 2000 lbs/ton	
P M:	1.9 lbs/MMcf =	<u>0.541</u> tons/yr
P M-10:	7.6 lbs/MMcf =	<u>2.16</u> tons/yr
S O x:	0.6 lbs/MMcf =	<u>0.171</u> tons/yr
N O x:	100.0 lbs/MMcf =	<u>28.5</u> tons/yr
V O C:	5.5 lbs/MMcf =	<u>1.57</u> tons/yr
C O:	84.0 lbs/MMcf =	<u>23.9</u> tons/yr

Dryer Burner (#2 & #1 oil)

<100

Proposed change

The following calculations determine the amount of emissions created by #2 & #1 distillate fuel oil @ 0.5 % sulfur, based on 8760 hours of use and AP-42, Tables 1.3-1, 1.3-2, 1.3-3

Pollutant:	<u>65.0 MMBtu/hr * 8760 hrs/yr</u>	* Ef (lbs/1000 gal) = (tons/yr)
	139000 Btu/gal * 2000 lbs/ton	
P M:	2.0 lbs/1000 gal =	<u>4.10</u> tons/yr
PM-10:	3.3 lbs/1000 gal =	<u>6.76</u> tons/yr
S O x:	71.0 lbs/1000 gal =	<u>145</u> tons/yr
N O x:	20.0 lbs/1000 gal =	<u>41.0</u> tons/yr
V O C:	0.34 lbs/1000 gal =	<u>0.696</u> tons/yr
C O:	5.0 lbs/1000 gal =	<u>10.2</u> tons/yr

If Rating >100 mmBtu	
N O x:	<u>24.0</u>
V O C:	<u>0.20</u>

Dryer Burner (#4 oil/ <100MMBTU)

Proposed change

The following calculations determine the amount of emissions created by #4 distillate fuel oil @ 0.5 % sulfur, based on 8760 hours of use and AP-42, Tables 1.3-1, 1.3-2, 1.3-3

Pollutant:	<u>65.0 MMBtu/hr * 8760 hrs/yr</u>	* Ef (lbs/1000 gal) = (tons/yr)
	138000 Btu/gal * 2000 lbs/ton	
P M:	2.0 lbs/1000 gal =	<u>4.13</u> tons/yr
PM-10:	3.3 lbs/1000 gal =	<u>6.81</u> tons/yr
S O x:	71.0 lbs/1000 gal =	<u>146</u> tons/yr
N O x:	20.0 lbs/1000 gal =	<u>41.3</u> tons/yr
V O C:	0.34 lbs/1000 gal =	<u>0.701</u> tons/yr
C O:	5.0 lbs/1000 gal =	<u>10.3</u> tons/yr

Dryer Burner (reused oil/atomizing burner)

The following calculations determine the amount of emissions created by reused (waste)
 fuel oil @ 0.50 % sulfur, based on 8760 hours of use and AP-42 Chapter 1.11

Proposed change
 0.600 % Ash
 0.000 % Lead

Pollutant: 65.0 MMBtu/hr * 8760 hrs/yr * Ef (lbs/1000 gal) = (tons/yr)
136000 Btu/gal * 2000 lbs/ton

P M:	39.6 lbs/1000 gal =	<u>82.9</u> tons/yr
P M-10:	34.2 lbs/1000 gal =	<u>71.6</u> tons/yr
S O x:	53.5 lbs/1000 gal =	<u>112</u> tons/yr
N O x:	16.0 lbs/1000 gal =	<u>33.5</u> tons/yr
VOC:	1.0 lbs/1000 gal =	<u>2.09</u> tons/yr
C O:	2.10 lbs/1000 gal =	<u>4.40</u> tons/yr
Pb:	0.00 lbs/1000 gal =	<u>0.000</u> tons/yr

** aggregate drying: batch-mix plant **

The following calculations determine the amount of emissions created by
 aggregate drying, based on 8760 hours of use and EPA SCC #3-05-002-05:

P M:	32 lbs/ton x	<u>220.0</u>	tons/hr x	8760 hrs/yr =	<u>30835</u> tons/yr
		2000	lbs/ton		
P M-10:	4.5 lbs/ton x	<u>220</u>	tons/hr x	8760 hrs/yr =	<u>4336</u> tons/yr
		2000	lbs/ton		
Lead:	3.30000000E-06 lbs/ton x	<u>220</u>	tons/hr x	8760 hrs/yr =	<u>0.003</u> tons/yr
		2000	lbs/ton		
HAPs:	0.0076 lbs/ton x	<u>220</u>	tons/hr x	8760 hrs/yr =	<u>7.32</u> tons/yr
		2000	lbs/ton		

HAPs include benzene, ethylbenzene, formaldehyde, methyl chloroform, naphthalene, toluene, xylene;
 arsenic, cadmium, chromium, manganese, mercury, and nickel compounds.

Emissions before controls (combustion plus production) are as follows:

natural gas	#2 oil	#4 oil	reused oil
P M: <u>30836</u> tons/yr	P M: <u>30839</u> tons/yr	P M: <u>30839</u> tons/yr	P M: <u>30918</u> tons/yr
P M-10: <u>4338</u> tons/yr	P M-10: <u>4343</u> tons/yr	P M-10: <u>4343</u> tons/yr	P M-10: <u>4408</u> tons/yr
S O x: <u>0.171</u> tons/yr	S O x: <u>145</u> tons/yr	S O x: <u>146</u> tons/yr	S O x: <u>112</u> tons/yr
N O x: <u>28.5</u> tons/yr	N O x: <u>41.0</u> tons/yr	N O x: <u>41.3</u> tons/yr	N O x: <u>33.5</u> tons/yr
V O C: <u>1.57</u> tons/yr	V O C: <u>0.696</u> tons/yr	V O C: <u>0.701</u> tons/yr	V O C: <u>2.09</u> tons/yr
C O: <u>23.9</u> tons/yr	C O: <u>10.2</u> tons/yr	C O: <u>10.3</u> tons/yr	C O: <u>4.4</u> tons/yr
Lead: <u>0.003</u> tons/yr	Lead: <u>0.003</u> tons/yr	Lead: <u>0.003</u> tons/yr	Lead: <u>0.003</u> tons/yr
HAPs: <u>7.32</u> tons/yr	HAPs: <u>7.32</u> tons/yr	HAPs: <u>7.32</u> tons/yr	HAPs: <u>7.32</u> tons/yr

B. Source emissions after controls

dryer combustion: gas

P M:	0.54 tons/yr x	<u>0.001</u>	emitted after controls =	<u>0.001</u> tons/yr
P M-10:	2.16 tons/yr x	<u>0.001</u>	emitted after controls =	<u>0.002</u> tons/yr

dryer combustion: #2 oil

P M:	4.10 tons/yr x	<u>0.001</u>	emitted after controls =	<u>0.004</u> tons/yr
P M-10:	6.76 tons/yr x	<u>0.001</u>	emitted after controls =	<u>0.007</u> tons/yr

dryer combustion: #4 oil

P M:	4.13 tons/yr x	<u>0.001</u>	emitted after controls =	<u>0.004</u>	tons/yr
P M-10:	6.81 tons/yr x	<u>0.001</u>	emitted after controls =	<u>0.007</u>	tons/yr

dryer combustion: reused oil

P M:	82.90 tons/yr x	<u>0.001</u>	emitted after controls =	<u>0.083</u>	tons/yr
P M-10:	71.59 tons/yr x	<u>0.001</u>	emitted after controls =	<u>0.072</u>	tons/yr

aggregate drying:

P M:	30835.20 tons/yr x	<u>0.001</u>	emitted after controls =	<u>30.8</u>	tons/yr
P M-10:	4336.20 tons/yr x	<u>0.001</u>	emitted after controls =	<u>4.34</u>	tons/yr

Emissions after controls (combustion plus production) are as follows:

	Gas	#2 Oil	#4 Oil	Reused Oil	
P M:	<u>30.8</u>	<u>30.8</u>	<u>30.8</u>	<u>30.9</u>	tons/yr
P M-10:	<u>4.34</u>	<u>4.34</u>	<u>4.34</u>	<u>4.41</u>	tons/yr

II. Allowable Emissions

A. The following calculations determine the maximum sulfur content of distillate #2 fuel oil allowable by 326 IAC 7:

limit:	0.5 lbs/MMBtu		
0.5 lbs/MMBtu x		<u>139000</u>	Btu/gal= <u>69.5</u> lbs/1000gal
69.5 lbs/1000gal /		<u>142</u>	lb/1000 gal = <u>0.489</u>
Sulfur content must be less than or equal to		<u>0.5</u>	% to comply with 326 IAC 7
and to limit SO2 emissions to 99 tons per year or less.			

B. The following calculations determine the maximum sulfur content of residual waste fuel oil allowable by 326-IAC 7:

limit:	1.6 lbs/MMBtu		
1.6 lbs/MMBtu x		<u>136000</u>	Btu/gal= 217.6 lbs/1000gal
217.6 lbs/1000gal /		<u>107</u>	lbs/1000 gal = <u>2.03</u>
Sulfur content must be less than or equal to		<u>2.0</u>	% to comply with 326 IAC 7
and to limit SO2 emissions to 99 tons per year or less.			

C. The following calculations determine the maximum sulfur content of distillate #4 fuel oil allowable by 326-IAC 7:

limit:	0.5 lbs/MMBtu		
0.5 lbs/MMBtu x		<u>138000</u>	Btu/gal= 69 lbs/1000gal
69 lbs/1000gal /		<u>142</u>	lbs/1000 gal = <u>0.486</u>
Sulfur content must be less than or equal to		<u>0.5</u>	% to comply with 326 IAC 7
and to limit SO2 emissions to 99 tons per year or less.			

D. The following calculations determine compliance with NSPS (subpart I), which limits stack emissions from asphalt plants to 0.04 gr/dscf:

$$\begin{array}{l}
 \frac{0.04 \text{ grains}^*}{\text{dscf}} \times \frac{60000 \text{ acfm}}{460 + \frac{528}{250} \text{ Temp}^* \times \frac{100 - 3\% \text{ moisture}}{100}} \\
 \\
 \frac{525600 \text{ minutes}^*}{\text{year}} \times \frac{1}{7000 \text{ grains}} \times \frac{1 \text{ ton}}{2000 \text{ lbs}} = \underline{65.0 \text{ tons/yr}}
 \end{array}$$

To meet NSPS, the following value value must be < amount calculated above 30.9 tons/yr

III. Limited Potential Emissions

FUEL USAGE LIMITATION: BASED ON NOx

The potential to emit NOx from the entire source is less than 100 tons per year. Therefore, no FESOP limit is required.

FUEL USAGE LIMITATION: BASED ON SO2

FUEL USAGE LIMITATION FOR BURNER (Gas)

$$\begin{array}{l}
 \frac{0.171 \text{ tons SO}_2}{\text{year}}^* \times \frac{2000 \text{ lbs}}{\text{ton}} = \frac{341.64 \text{ lbs SO}_2}{\text{year}} \\
 \\
 \frac{341.64 \text{ lbs SO}_2}{\text{year}} / \frac{0.6 \text{ lbs SO}_2}{\text{MMcf}} = \frac{569.40 \text{ MMcf}}{\text{year}} \\
 \\
 \frac{569.40 \text{ MMcf}}{\text{year}}^* \times \frac{99.0 \text{ tons/yr}}{0.17 \text{ tons/yr}} = \frac{0.0 \text{ MMcf}}{\text{year}} \text{ No FESOP Limit}
 \end{array}$$

FUEL USAGE LIMITATION FOR BURNER (#2 Oil)

$$\begin{array}{l}
 \frac{145.4 \text{ tons SO}_2}{\text{year}}^* \times \frac{2000 \text{ lbs}}{\text{ton}} = \frac{290844.60 \text{ lbs SO}_2}{\text{year}} \\
 \\
 \frac{290844.60 \text{ lbs SO}_2}{\text{year}} / \frac{71.0 \text{ lbs}}{1000 \text{ gal}} = \frac{4096402.88 \text{ gal}}{\text{year}} \\
 \\
 \frac{4096402.88 \text{ gal}}{\text{year}}^* \times \frac{99.0 \text{ tons/yr}}{145.42 \text{ tons/yr}} = \frac{2788732 \text{ gal}}{\text{year}} \text{ FESOP Limit}
 \end{array}$$

FUEL USAGE LIMITATION FOR BURNER (#4 Oil)

$$\begin{array}{l}
 \frac{146.5 \text{ tons SO}_2}{\text{year}}^* \times \frac{2000 \text{ lbs}}{\text{ton}} = \frac{292952.17 \text{ lbs SO}_2}{\text{year}} \\
 \\
 \frac{292952.17 \text{ lbs SO}_2}{\text{year}} / \frac{71.0 \text{ lbs}}{1000 \text{ gal}} = \frac{4126086.96 \text{ gal}}{\text{year}} \\
 \\
 \frac{4126086.96 \text{ gal}}{\text{year}}^* \times \frac{99.0 \text{ tons/yr}}{146.48 \text{ tons/yr}} = \frac{2788732 \text{ gal}}{\text{year}} \text{ FESOP Limit}
 \end{array}$$

FUEL USAGE LIMITATION FOR BURNER (Reused Oil)

$$\begin{array}{rclclcl} \frac{112.0 \text{ tons SO}_2}{\text{year}} & * & \frac{2000 \text{ lbs}}{\text{ton}} & = & \frac{223991.91 \text{ lbs SO}_2}{\text{year}} \\ \\ \frac{223991.91 \text{ lbs SO}_2}{\text{year}} & / & \frac{53.5 \text{ lbs}}{1000 \text{ gal}} & = & \frac{4186764.71 \text{ gal}}{\text{year}} \\ \\ \frac{4186764.71 \text{ gal}}{\text{year}} & * & \frac{99.0 \text{ tons/yr}}{112.00 \text{ tons/yr}} & = & \frac{3700935 \text{ gal}}{\text{year}} \text{ FESOP Limit} \end{array}$$